

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Athanassios Tzikas et al.

Serial No. 10/579,364

Group Art Unit: 1793

Filed May 15, 2006

For MIXTURE OF REACTIVE DYES AND THEIR USE

Examiner: H. Klemanski

DECLARATION UNDER RULE 132

I, Georg ROENTGEN, a citizen of Germany, residing at Pochgasse 13, D-79104 Freiburg im Breisgau, hereby declare:

That I was awarded the degree of a Chemical Engineer of the Fachhochschule Aachen, (Germany), in 1990;

That I have been employed by Ciba Specialty Chemicals, Basel, as a research chemist since 1990 and by Huntsman Advanced Materials (Switzerland) GmbH since 2006 and presently hold the position of a Research Chemist in the Division Textile Effects;

That I have been engaged in the field of dyestuffs for Ciba Specialty Chemicals since 1990 and for Huntsman Advanced Materials since 2006;

That based on the above education and experience, I consider myself an expert in the field of dyestuffs.

I, Georg ROENTGEN, declare that the preparation of dyestuff mixtures A and B as well as the following dyeings and tests were carried out under my direction and supervision;

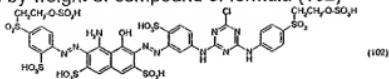
That I am submitting herewith the following exact report of the tests mentioned below.

Determination of Fastness to Water

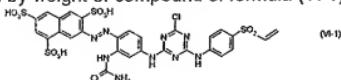
The following dye mixtures were prepared:

Mixture A according to the present application

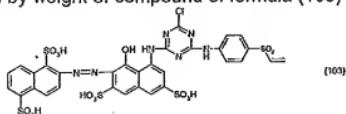
80 % by weight of compound of formula (102)



12 % by weight of compound of formula (VI-1)

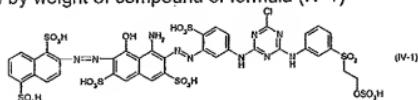


8 % by weight of compound of formula (103)

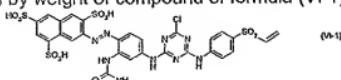


Mixture B according to Example 28 of WO 00/43455

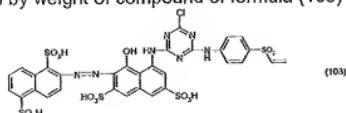
80 % by weight of compound of formula (IV-1)



12 % by weight of compound of formula (VI-1)



8 % by weight of compound of formula (103)



Wash out Test

As described in the present application, a bleached cotton fabric (Cretonne 1-3011/45) was dyed with Dye Mixtures A (invention) and B (prior art), respectively, according to the exhaust process (liquor ratio 1:80). The dyes were applied in such amounts that dyeings of the same colour strength were obtained (Mixture A: 54.9 g/l, Mixture B: 50,4 g/l).

The fastness to water (severe) was determined according to ISO 105/E01 by evaluation of the bleeding effect, i.e. the degree of colouration of non-coloured fabrics concurrently present in the bath during the washing process. The results are summarized in Table 1:

Table 1: Fastness to water (severe) according to ISO 105/E01

Mixture	CA	CO	PA	PES	PAC	WO
A (invention)	4-5	3-4	4-5	4-5	4	3-4
B (prior art)	3	2-3	3	3-4	3	2-3

CA: cellulose acetate

CO: cotton

PA: polyamide

PES:polyester

PAC:polyacrylonitrile

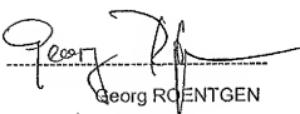
WO: wool

I, Georg ROENTGEN, hereby declare:

1. That based on my education and experience, I consider myself an expert in the field of dyeing art and dyestuff preparation;
2. That the results of the above tests show that the new dyestuff mixture (A) is superior to the structurally closest dyestuff mixture B with respect to the property tested;
3. That fastness to water is an important feature for the textile industry and an improvement in this property is of considerable importance;
4. That the above given measurement of fastness to water demonstrates a significant improvement in this property which is of commercial importance;
5. That the results of the tests are surprising to me and I would not have predicted such difference in the property tested.

I, Georg ROENTGEN, declare further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that wilful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 Title 18 of the United States Code and that such wilful false statements may jeopardize the validity of the application or any patent issuing thereon.

Signed this 18 th day of August 2009



Georg ROENTGEN